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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/215,421	12/18/1998	PAUL CHANG	16845-3	7395

7590

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EXAMINER

SCHULTZ, WILLIAM C

ART UNIT

PAPER NUMBER

2664

DATE MAILED: 03/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/215,421

Applicant(s)

CHANG ET AL.

Examiner

William C. Schultz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 1998.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 1998 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ernst et al. [U.S. Pat. 5,381,348].

Regarding claim 1, Ernst et al. discloses all subject matters as following: A test set for testing a communications network comprising: at least one signal input port; test circuitry coupled to the at least one signal input port, the test circuitry receiving signals from the signal input port and generating test data; a processor coupled to the test circuitry, the processor receiving test data and generating test results; a user input device coupled to the processor, the user input device sending commands to the processor; and a display operatively coupled to the processor, the display receiving and showing the test results, wherein the test set is capable of performing line qualification and connectivity testing. **(figures 6A, 27)**

Regarding claim 2, Ernst et al. further discloses line qualification includes transmission line tests, the transmission line tests includes at least one of digital multimeter tests, transmission impairment measurement set (TIMS) tests, and time domain reflection (TDR) tests. **(abstract)**

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Regarding claim 3, Ernst et al. further discloses the display is a graphical display.
(figure 27)

Regarding claim 4, Ernst et al. further the graphical display shows selected ones of the test results in a graphical form.

Regarding claim 5, Ernst et al. further discloses the connectivity testing includes bit-error-rate testing and loopback testing. **(col. 16, lines 59-68; col. 17, lines 1-5)**
Figure 5 shows the test set connected to a token ring, The test set inherently provides loopback testing in that configuration.

Regarding claim 6, Ernst et al. further discloses connectivity testing is performed using a predetermined transmission technology. **(abstract)**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ernst et al. [U.S. Pat. 5,381,348] as applied to claim 1 above, and further in view of Kahkoska et al. [U.S. Pat. 6,002,671].

Regarding claim 7, Ernst et al. discloses claim 6 as above but fails to disclose the predetermined transmission technology is one of E1, TI, ISDN, DSL, HDSL, ADSL, and

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xDSL. Ernst et al. shows a token ring for the connected medium, the use of E1, T1, ISDN, DSL, HDSL, ADSL, and xDSL for the lan medium is equivalent to token ring.

It would be obvious for one skilled in the art at the time of invention to modify Ernst et al. to be compatible with recent technology.

Regarding claim 8, Ernst et al. discloses claim 1 as above but fails to disclose the test set is battery powered. The test set would be able to perform the same functions if it were plugged into an outlet to receive power.

It would be obvious to one skilled in the art at the time of invention to modify Ernst et al. to be battery powered so that tests could be performed at locations where a power outlet was unavailable.

Regarding claims 9,20, Ernst et al. discloses as above but fails to disclose the test set is a portable unit. The test set could be the size of a house and still perform the same functions.

It would be obvious to one skilled in the art at the time of invention to modify Ernst et al. to be a portable unit so that tests could be performed on moving vehicles, such as an airplane.

Regarding claims 10,21, Ernst et al. discloses as above but fails to disclose the test set is a hand held unit.. The test set could be the size of a house and still perform the same functions.

It would be obvious to one skilled in the art at the time of invention to modify Ernst et al. to be a portable unit so that tests could be performed at remote locations.

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Regarding claim 10, Ernst et al. discloses claim 1 as above but fails to disclose the test set weighs less than three pounds.. The test set could weigh 4 tons and still perform the same functions.

It would be obvious to one skilled in the art at the time of invention to modify Ernst et al. to weigh less than three pounds so that tests could be performed at remote locations.

Regarding claim 12, Ernst et al. discloses as above but fails to disclose a modem module operatively coupled to the processor, the modem module receiving and processing the test data and generating processed results, and wherein the display receives and displays the processed results.

Kahkoska et al. discloses the above limitation with respect to using an ADSL modem connected to the test equipment by a lan connection. Looking at figure 6A of Ernst et al. the network control box could be replaced by the ADSL modem of Kahkoska et al. to achieve the above limitation. **(abstract, lines 2-6; figure 2)**

It would be obvious for one skilled in the art at the time of invention to modify Ernst et al. with the teachings of Kahkoska et al. so that the test set would be compatible with DSL equipment.

Regarding claims 13,24, Kahkoska et al. further discloses the modem module includes a device for storing an identification value that identifies the modem module to the test set. **(figure 2)** Item 107 in figure 2 is a lan connection as identified in figure 2. To communicate on a lan the ADSL modem must have a nic in it and every nic has a unique mac address so that it can communicate on a lan. The unique address is stored

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in the nic and the test set must use that address (identification value) to communicate with the ADSL modem.

Regarding claim 14, Kahkoska et al. further discloses the modem module is configured to perform xDSL connectivity testing. **(figure 2)**

Regarding claim 15, Kahkoska et al. further discloses as above but fails to disclose the modem module is configured to perform ATM connectivity testing.

As stated above for claim 7, It would be obvious for one skilled in the art at the time of invention to modify Ernst et al. to be compatible with recent technology.

Regarding claims 16,22,26,27, Ernst et al. discloses A telecommunications transmission test set comprising: at least one signal input port; test circuitry coupled to the at least one signal input port, the test circuitry receiving signals from the signal input port and generating test data; a processor coupled to the test circuitry, the processor receiving test data and generating test results; a user input device coupled to the processor, the user input device sending commands to the processor; and a display coupled to the processor, the display receiving and displaying the test results, wherein the test set is configurable to perform line qualification or connectivity testing as selected by a command received from the user input device. **(figure 6A)**

Ernst et al. fails to disclose a modem module operatively coupled to the processor, wherein the modem module, when directed, receives and processes the test data to generate processed results, and wherein the processor generates the test results based, in part, on the processed results;

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As stated above, Kahkoska et al. discloses the above limitation with respect to using an ADSL modem connected to the test equipment by a lan connection. Looking at figure 6A of Ernst et al. the network control box could be replaced by the ADSL modem of Kahkoska et al. to achieve the above limitation. **(abstract, lines 2-6; figure 2)**

It would be obvious for one skilled in the art at the time of invention to modify Ernst et al. with the teachings of Kahkoska et al. so that the test set would be compatible with DSL equipment.

Regarding claim 17, Ernst et al. further discloses line qualification includes digital multimeter tests, time domain reflection tests, and transmission line impairment tests.

Regarding claim 18, Ernst et al. further discloses connectivity testing includes bit-error-rate testing and loopback testing.

Regarding claim 19, Ernst et al. further discloses connectivity testing can be performed using a predetermined transmission technology.

Regarding claim 23, Kahkoska et al. further discloses the master tester unit includes a graphical display for showing the test results in graphical form. **(figure 2)**

Regarding claim 25, Kahkoska et al. further discloses the modem module determines a maximum transmission rate on the communications network based on the processed results. **(figure 2; col. 1, lines 57-63)**

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Bottman [U.S. Pat. 5,530,367] – Pulse Based Cable Attenuation Measurement System.

Walsh [U.S. Pat. 5,382,910] – Dual Time Base Zero Dead Zone time Domain Reflectometer

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Schultz whose telephone number is 703-305-2367. The examiner can normally be reached on M-F(7-4)(first bi-week) M-Th(7-4)(second bi-week).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 703-305-4366. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-9508 for regular communications and 703-305-9000 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

William Schultz
February 11, 2002